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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---|-----------------------------|
| 10/807,488 | 03/23/2004 | Ronald P. Swanson | 58696US002 | 3060 |
| 32692 7590 05/07/2007 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427 | | | EXAMINER WOLLSCHLAGER, JEFFREY MICHAEL | |
| | | | ART UNIT 1732 | PAPER NUMBER |
| | | | NOTIFICATION DATE 05/07/2007 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/807,488 | | SWANSON, RONALD P. | |
| | Examiner | | Art Unit | |
| | Jeff Wollschlager | | 1732 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 and 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 21, 2007 has been entered.

Response to Amendment

Applicant's amendment to the claims and specification filed February 21, 2007 has been entered. Claims 16-19 are currently amended. Claims 1-15 and 21-23 remain withdrawn from further consideration. Claims 16-20 are under examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 16, lines 10-12, the limiting effect of the "the first portion" and the "the second portion" at this point in the claim are unclear. Both recitations are understood to mean to recite "the web". This

interpretation of the intended limitation was confirmed to be accurate in a phone call from Ms. Nicole Einerson on April 26, 2007. Appropriate correction to the claim language is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 17, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda et al. (U.S. 6,362,020) in view of Okubo et al. (JP 63-171755 translation) and Akira (U.S. 4,952,281).

Regarding claim 16, Shimoda et al. teach a method of removing the curl from a web/substrate in a roll ((262), (901)) system by inducing a plastic deformation/strain in the web/substrate with a roller type curl corrector (Abstract; Figures 7 and 9; col. 3, lines 16-30) wherein the web path is such that only one surface of the web/substrate is contacted by the rollers over the entire web path (Figure 7). The rolls shown in Figure 7 would co-rotate, clockwise, based on the travel direction of the web/substrate. Shimoda et al. further disclose controlling the spacing between the rollers, thereby controlling the radius of the web through the moving web path (Figure 7 element (703); col. 7, lines 1-18). Shimoda et al. suggest by disclosure of the adjustment mechanism (703) a method of signaling the system to adjust, but do not expressly disclose what that method

entails. Further, while Shimoda et al. disclose processing rolls of material, as opposed to individual sheets of material, Shimoda et al. do not expressly disclose processing a web of indeterminate length.

However, Okubo et al. disclose a method of processing a web wherein the position of the web in the location between the rollers (e.g. f, f', g, g', h, h') and the radius of the web is controlled by adjusting the gap between the rollers to control the removal of the curl in the web (page 6, lines 5-22; Figure 7 showing roller (8) moved closer to roller (7); Figure 10 (24) (25); page 7, lines 4-28) based on the conditions of the roll (page 3, 4th full paragraph; page 2, Scope of the claims). The examiner notes that the operation of the equipment in Okubo is controlled by counting the rotation of the rollers to provide a signal of the location of the web between the rollers, plungers to control the gap between the rollers and a sensor (12) to detect the leading edge of the web.

Additionally, Akira discloses a method of controlling the wrap angle/radius of a sheet with a controller wherein a splicing mechanism is employed to provide for a continuous operation (Abstract; Figure 2 (12)).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the control scheme taught and suggested by Okubo et al. to control the degree of curl correction provided by element (703) and the system shown in Figure 7 in the method of Shimoda et al. for the purpose of achieving Shimoda et al.'s stated purpose. Further, one having ordinary skill would have been motivated by the teaching of Akira regarding processing spliced rolls,

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while still eliminating the curl within the roll, to splice/connect the rolls employed by Shimoda et al. to achieve a more productive operation.

It is noted that the cited references are analogous art because they all deal with the same technical problem solving area. Namely, they deal with the elimination of curl in a web of material.

As to claim 17, Shimoda et al. disclose rollers (Figure 7).

As to claims 19 and 20, Okubo et al. disclose adjusting the gap thereby adjusting the strain based upon the diameter of the roll (page 7, 4th full paragraph).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda et al. (U.S. 6,362,020) in view of Okubo et al. (JP 63-171755 translation) and Akira (U.S. 4,952,281), as applied to claims 16, 17, 19 and 20 above, and further in view of either of Crowley et al. (U.S. 6,626,343) or Calvert (U.S. 6,820,671).

As to claim 18, the method of claim 16 is disclosed by the prior art as set forth above. Further it is noted that Shimoda et al employ a plurality of closely spaced rollers. However, Shimoda et al. do not disclose employment of a belt as the co-rotating members. However, Crowley et al. (col. 18, lines 16-21) and Calvert (col. 4, line 62- col. 5, line 2) individually disclose the art recognized equivalence and interchangeability of belts and rollers.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have replaced the plurality of closely

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spaced rollers disclosed by Shimoda et al. with a belt as suggested by either of Crowley et al. or Calvert since rollers and belts are recognized interchangeable equivalents.

Response to Arguments

Applicant's arguments filed February 21, 2007 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

April 26, 2007


CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER
4/30/07